

REMARKS

The title has been changed as suggested by the Examiner.

Paragraph [0007] of the specification has been amended to further describe illustrated features of the invention and to provide antecedent language for the claims.

Claims 1-11 were rejected under 35 USC 103(a) as being unpatentable over Wilson (3,642,401) in view of Maeda et al. (5,949,639). Wilson is not relevant art. It discloses a monitoring system for an injection molding machine. As described in col 2, lines 65 et seq the movable platen 12 is moved into sealing engagement with the stationary platen 14 to close the cavity 18 into which molten thermoplastic material is injected through a conduit 16. The thermoplastic material is not compressed. It is cooled and then is removed from the cavity when the movable platen 12 is withdrawn. The broken lines 18 define a cavity rather than an engaged position of the movable platen 12. Wilson has neither rib or channel punches. The projections on the movable platen 12 are merely used to close the injection chamber 18 and they are not operated to define ribs or channels and they do not perform any compression function. The movable platen 12 does not perform a compaction function and even if it did it would not form a rib or channel.

Maeda et al 5,949,639 shows, in Figures 5-8, a capacitor element compacting device which has a pair of opposed presser die members 6, 7 (or 6'', 7'') which can be simultaneously moved toward one another. The projections 6a and 7a are part of the die members 6, 7. They are not separate from the die members 6, 7. Therefore the powder between the projections 6a, 7a is compressed to a greater extent than the powder between the remaining confronting faces of the die members. Applicant's capacitor element forming equipment achieves uniform compression of the powder by virtue of separate interposed rib and channel punches which during

compression are moved different distances at different speeds to achieve a uniform rate of powder compression in both the rib and channel areas of the capacitor element.

Independent claim 1 has been amended to clearly define the interposed rib and channel punches and the drive means for moving them simultaneously at different speeds to obtain the same degree of compaction of the rib and channel portions of the capacitor element as the compaction process is carried out. The cited art does not suggest opposed sets of interposed rib and channel punches and does not suggest compaction apparatus which compacts the rib and channel areas of the capacitor element at the same reduction rate.

Claim 2 defines apparatus for moving the channel punches out of their compacting position prior to moving the rib punches out of their compacting position. (The sequence illustrated by Figures 7 and 8). This prevents breakdown of the edges of the capacitor ribs.

Dependent claims 3 – 7 define features not shown or taught by the cited art and are also believed allowable for reasons advanced for allowance of claims from which they depend.

In addition to many of the distinguishing features of claim 1, independent claim 8 defines a removable top wall. The prior art does not suggest sets of rib and channel punches interleaved in side by side relation to one another. The prior art does not suggest opposed sets of rib and channel punches having the same displacement ratio between their loading and compacting positions. These features of claim 8 also distinguish applicant press over the cited art.

Dependant claims 9 and 10 are believed to be allowable for the reasons advanced for allowance of parent claim 8. Also claim 9 defines the actuator means as moving the rib and channel punches at different speeds to produce a uniform rate of compression of the powder throughout the element (89). There is no suggestion of such an actuator in the cited art.

Independent claim 11 defines the vertical press (Figures 17-22) having upper rib and channel punches interleaved in side by side relation and lower rib and channel punches

interleaved in side by side relation. This structure is not suggested by the references. Claim 11 also defines drive means operable to simultaneously move the upper and lower rib and channel punches from their precompression positions to their compression positions at speeds proportional to the distances the rib and channel punches travel in moving from their precompression positions to their compression positions – which results in a uniformly compacted capacitor element. An apparatus having such capability is not taught by the cited art.

New claims 20, 21, dependent on claim 11, are similar to cancelled claims 12 and 13. Claim 20 is believed allowable for the reasons advanced for allowance of parent claim 11 and by virtue of its defining an adjacent pair of side walls of the compression chamber as removable to facilitate removal of the formed capacitor element. The cited patents do not suggest sequential retraction of channel and rib punches in that order, as defined in claim 21, which prevents edge damage to the formed capacitor element.

New independent claim 22 is similar to independent claim 8 except the ratio of linear distances between the opposed rib punches in their loading and compacting positions is defined as being “substantially” the same as the ratio of the linear distances between the channel punches in their loading and compacting positions.

New claim 23 defines a uniform section compression chamber with openings at its opposite ends. Interposed rib and channel punches extend through each of the openings and first and second drive means simultaneously move the punches between their non-compaction and compaction positions. The cited patents do not teach such a construction.

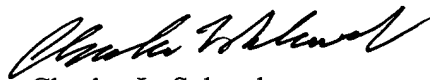
New claim 24 defines a capacitor element press having openings at its opposite ends through which interposed rib and channel punches extend. First and second drive means are defined for simultaneously moving the channel punches from their non-compaction position to their compaction position and also as being operable to move the channel punches from their

compaction position to their non-compaction position prior to the rib punches being moved from their compaction position to their non-compaction position. The defined punches withdrawal sequence prevents breakdown of the edges of the capacitor ribs which can occur should the rib and channel punches be withdrawn using other procedures. Such features are not suggested by the cited patents.

A notice of allowance is solicited.

It is requested that the \$600 fee for the three additional independent claims and the \$200 fee for four claims over 20 be charged to Deposit Account No. 08-0719.

Respectfully submitted,



Charles L. Schwab
Attorney for Applicant
Registration No. 17,497
NEXSEN PRUET, LLC
Post Office Box 10107
Greenville, SC 29603
Telephone: (864) 370-2211
Facsimile: (864) 282-1177

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Amendments to the Drawings:

The attached sheet of drawings includes a change in the designation of the sheet number from an incorrect designation (2/7) to a correct designation (2/6).

ATTACHMENTS: Replacement Sheet

Annotated Sheet showing changes.

2/6
~~2/7~~

